

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) An isolated antibody or fragment thereof comprising an amino acid sequence substantially as set out in SEQ ID NO:14, SEQ ID NO:26, or a fragment of SEQ ID NO:14 or SEQ ID NO:26 that is SEQ ID NO:n, wherein n is 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, or 48; and wherein the antibody is capable of specifically binding GDF 8 or BMP 11.
2. (Currently amended) The antibody of claim 1, comprising the amino acid sequence of any one of SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, and SEQ ID NO:36 SEQ ID NO:n, wherein n is 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, or 48.
3. (Currently amended) The antibody of claim 1, wherein said antibody is an scFv fragment expressed by E. coli having ATCC Deposit Designation No. PTA 4741, PTA 4740, or PTA 4739.
4. (Original) The antibody of claim 1, wherein the antibody is capable of specifically binding to a protein comprising the amino acid sequence set forth in SEQ ID NO:54.
5. (Currently amended) The antibody of claim 4, wherein at least SEQ ID NO:54 is characterized by at least one of the following:
 - (a) the second amino acid ~~from the N-terminus~~ of SEQ ID NO:54 is methionine[.];

(b) the third amino acid ~~from the N terminus of SEQ ID NO:54~~ is serine[, or]]; and

(c) the fifth amino acid ~~from the N terminus of SEQ ID NO:54~~ is isoleucine, independently of each other.

6. (Original) The antibody of claim 1, wherein the antibody is human.

7. (Original) The antibody of claim 1, wherein the antibody is IgG₁ or IgG₄.

8. (Original) The antibody of claim 1, wherein the amino acid sequence of the antibody is modified to reduce or alter effector function.

9. (Original) The antibody of claim 8, wherein the amino acid sequence is modified at residues corresponding to amino acid 117 or amino acid 120 of SEQ ID NO:53.

10. (Original) The antibody of claim 1, wherein the antibody is IgG_{1A} or IgG_{1K}.

11. (Original) A pharmaceutical composition, comprising the antibody of claim 1.

12.-29. (Canceled)

30. (Currently amended) An antibody produced by the steps of:

(a) providing a starting repertoire of nucleic acids encoding a variable domain which either include a CDR3 to be replaced or lack a CDR3 encoding region;

(b) combining the repertoire with a donor nucleic acid encoding an amino acid sequence substantially as set out in any one of SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, and SEQ ID NO:36, such that the donor nucleic acid is inserted into the CDR3 region in the repertoire so as to provide a product repertoire of nucleic acids encoding a variable domain;

(c) expressing the nucleic acids of the product repertoire;

(d) selecting a specific antigen binding fragment specific for GDF 8; and

(e) recovering the specific antigen binding fragment or nucleic acid encoding the binding fragment the method of claim 29.

31.-32. (Canceled)

33. (Original) An isolated antibody against GDF 8, wherein the antibody is capable of inhibiting binding of GDF 8 to ActRIIB.

34. (Currently amended) The antibody of claim 33 comprising the amino acid sequence substantially as set out in of SEQ ID NO:14, SEQ ID NO: 26, or a fragment of SEQ ID NO: 14 or SEQ ID NO:26 ~~SEQ ID NO:n, wherein n is 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, or 48.~~

35. (Currently amended) The antibody of claim 33 comprising the amino acid sequence as set out in of any one of SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:30, SEQ ID NO: 31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, and SEQ ID NO:36 ~~SEQ ID NO:n, wherein n is 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, or 48.~~

36. (Canceled)

37. (Original) The antibody of claim 33 wherein the antibody is capable of specifically binding BMP 11.

38.-40. (Canceled)

41. (Currently amended) An antibody made by the steps of:

(a) culturing E. coli having ATCC Deposit Designation No. PTA 4741 and recovering the expressed Myo29 antibody;

(b) fusing the nucleic acid encoding the svFv of Myo29 with nucleic acids encoding the Fc portion of an immunoglobulin and expressing the fused nucleic acid in a cell; and

(c) germlining the fused sequence using the method of claim 40.

42. (Original) An antibody capable of specifically binding to an epitope characterized by the amino acid sequence set forth in SEQ ID NO:54.

43. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 1 to 117 of SEQ ID NO:14 (SEQ ID NO:16).

44. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 135 to 239 of SEQ ID NO:14 (SEQ ID NO:18).

45. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 31 to 35 of SEQ ID NO:14 (SEQ ID NO:31).

46. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 50 to 66 of SEQ ID NO:14 (SEQ ID NO:32).

47. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 99 to 106 of SEQ ID NO:14 (SEQ ID NO:33).

48. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 157 to 167 of SEQ ID NO:14 (SEQ ID NO:34).

49. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 183 to 189 of SEQ ID NO:14 (SEQ ID NO:35).

50. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:14 comprises amino acids 222 to 228 of SEQ ID NO:14 (SEQ ID NO:36).

51. (New) The antibody of claim 1, wherein the fragment of SEQ ID NO:26 comprises amino acids 135 to 239 of SEQ ID NO:26 (SEQ ID NO:30).